

What is claimed is:

1. A radar sensor comprising:
 - a transmission circuit to transmit a transmission signal;
 - a reception circuit to receive a reflection signal based on the transmission signal;
 - a transmission antenna electrically coupled to the transmission circuit to radiate the transmission signal generated in the transmission circuit;
 - a reception antenna electrically coupled to the reception circuit to receive the reflection signal and provide the reception circuit with the reflection signal; and
 - a resin package that monolithically seals the transmission circuit, the reception circuit, the transmission antenna, and the reception antenna,wherein the transmission circuit, the reception circuit, the transmission antenna, and the reception antenna are monolithically formed on a single microwave monolithic integrated circuit chip.
2. The radar sensor according to claim 1,
 - wherein a dielectric lens is formed on the resin package so as to cover the transmission antenna and the reception antenna.
3. The radar sensor according to claim 2,
 - wherein the dielectric lens is formed integrally with the resin package by using the same materials as that of the resin package.
4. The radar sensor according to claim 2,
 - wherein the dielectric lens and the resin package are separately formed, and the dielectric lens is adhered onto the resin package.
5. The radar sensor according to claim 1,
 - wherein the transmission antenna and the reception antenna are arranged so as to be disposed symmetrically with an assembly of the transmission circuit and the reception circuit.

6. The radar sensor according to claim 2,
wherein the transmission antenna and the reception antenna are arranged so as to be disposed symmetrically with an assembly of the transmission circuit and the reception circuit.
7. The radar sensor according to claim 3,
wherein the transmission antenna and the reception antenna are arranged so as to be disposed symmetrically with an assembly of the transmission circuit and the reception circuit.
8. The radar sensor according to claim 1,
wherein a frequency of the transmission signal is operational in a frequency range from 20GHz to 100GHz.
9. The radar sensor according to claim 2,
wherein a frequency of the transmission signal is operational in a frequency range from 20GHz to 100GHz.
10. The radar sensor according to claim 3,
wherein a frequency of the transmission signal is operational in a frequency range from 20GHz to 100Hz.
11. The radar sensor according to claim 1,
wherein the microwave monolithic integrated circuit chip further includes a signal processing circuit that processes an output from at least one of the transmission circuit and the reception circuit.
12. The radar sensor according to claim 2,
wherein the microwave monolithic integrated circuit chip further includes a signal processing circuit that processes an output from at least one of the transmission circuit and the reception circuit.

13. The radar sensor according to claim 3,
wherein the microwave monolithic integrated circuit chip further includes a signal processing circuit that processes an output from at least one of the transmission circuit and the reception circuit.
14. The radar sensor according to claim 2,
wherein a material for the dielectric lens has a relative permittivity ranging from 3 to 6.
15. The radar sensor according to claim 3,
wherein a material for the dielectric lens has a relative permittivity ranging from 3 to 6.
16. A radar sensor comprising:
an active circuit assembly to transmit a transmission signal and receive a reflection signal based on the transmission signal;
a transmission antenna electrically coupled to the active circuit assembly to radiate the transmission signal generated in the active circuit assembly;
a reception antenna electrically coupled to the active circuit assembly to receive the reflection signal and provide the active circuit assembly with the reflection signal; and
a resin package that monolithically seals the active circuit assembly, the transmission antenna, and the reception antenna,
wherein the active circuit assembly, the transmission antenna, and the reception antenna are monolithically formed on a single microwave monolithic integrated circuit chip.
17. The radar sensor according to claim 16,
wherein a dielectric lens is formed on the resin package so as to cover the transmission antenna and the reception antenna.
18. The radar sensor according to claim 16,

wherein the transmission antenna and the reception antenna are arranged so as to be disposed symmetrically with the active circuit assembly.

19. The radar sensor according to claim 16,
wherein a frequency of the transmission signal is operational in a frequency range from 20GHz to 100GHz.
20. The radar sensor according to claim 16,
wherein the microwave monolithic integrated circuit chip further includes a signal processing circuit that processes an output from the active circuit assembly.